

WHAT IS CLAIMED IS:

- 1 1. A communications system, comprising:
2 a plurality of transceiver nodes configured to utilize a time division
3 multiple access structure to communicate between the transceiver nodes, each
4 transceiver node generating congestion metric information based on the
5 utilization of a link to each of its neighbors; and
6 the time division multiple access structure including a plurality of
7 time slots during which the transceiver nodes are configured to communicate
8 data cells, the data cells being transmitted from a transmission queue, the data
9 cells including routing information and the congestion metric information.
- 1 2. The communication system of claim 1, wherein the congestion
2 metric information is generated by a channel access subsystem.
- 1 3. The communication system of claim 1, wherein the congestion
2 metric information is based on cell counts transmitted in unicast and broadcast
3 allocated slots.
- 1 4. The communication system of claim 3, wherein the cell counts are
2 compared against the total capacity of each link.
- 1 5. The communication system of claim 1, wherein the congestion
2 metric information is based on the fullness of priority queues.
- 1 6. The communication system of claim 1, wherein the congestion
2 metric information is based on the availability of digital signal processor (dsp)
3 buffers.
- 1 7. The communication system of claim 1, wherein the congestion
2 metric information is based on the availability of unallocated slots.

1 8. A method of propagating congestion information in a transmission
2 system, the transmission system comprising transceiver nodes, comprising:
3 measuring by a node, the utilization of each of the links to each of
4 its neighbors;
5 generating congestion metric information based on the link
6 utilization;
7 combining the congestion metric information with routing
8 information;
9 transmitting the congestion metric information and routing
10 information.

1 9. The method of claim 8, wherein the congestion metric information is
2 provided as one of a predetermined number of states.

1 10. The communication system of claim 9, wherein the predetermined
2 number of states is four (4).

1 11. The communication system of claim 8, wherein a route
2 management subsystem disseminates the congestion metric information.

1 12. The communication system of claim 8, wherein a flow control
2 subsystem of a second node may utilize the congestion metric information when
3 received by the second node.

1 13. The communication system of claim 8, wherein the congestion
2 metric information and routing information is transmitted by a route management
3 subsystem.

1 14. The communication system of claim 8, wherein the congestion
2 metric information is generated by a channel access subsystem.

1 15. The communication system of claim 8, wherein the transmission
2 system is a time division multiple access (TDMA) system.

1 16. A radio transceiver propagating congestion information in a radio
2 network system, the radio network system comprising radio transceiver nodes,
3 comprising:

4 a means for measuring by a node, the utilization of each of the links
5 to each of its neighbors;

6 a means for generating congestion metric information based on the
7 link utilization;

8 a means for combining the congestion metric information with
9 routing information;

10 a means for transmitting the congestion metric information and
11 routing information.

1 17. The radio transceiver of claim 16, wherein the congestion metric
2 information is provided as one of a predetermined number of states.

1 18. The communication system of claim 17, wherein the predetermined
2 number of states is four (4).

1 19. The communication system of claim 16, wherein a route
2 management subsystem disseminates the congestion metric information.

1 20. The communication system of claim 16, wherein a flow control
2 subsystem of a second node may utilize the congestion metric information when
3 received by the second node.

1 21. The communication system of claim 16, wherein the congestion metric
2 information is generated by a channel access subsystem.

- 1 22. The communication system of claim 16, wherein the radio network
2 system is a time division multiple access (TDMA) system.